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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the application of:
Charles Edward Bowers

Docket: 30-4397 DIV-2

Serial Number: 10/631,320

Group Art Unit: 1733

Filed: July 31, 2003

Examiner: Sam Chuan C. Yao

For: UNTWISTED WRAPPED SINGLES YARNS AND CARPETS
MANUFACTURED THEREFROM

APPEAL BRIEF FOR APPELLANT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an Appeal to the Board of Patent Appeals and Interferences from the Final Rejection of claims 29-48 mailed July 28, 2005 in the above identified case. A Notice of Appeal was filed on December 27, 2005. An oral hearing is not requested.

The Commissioner is authorized to charge the required appeal brief fee of \$500.00 to Deposit Acct. No. 01-1125. In the event that the Commissioner determines that an extension of time is required in order for this submission to be timely, it is requested that this submission include a petition for an extension for the required length of time and the Commissioner is authorized to charge any other fees necessitated by this paper to Deposit Acct. No. 01-1125.

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1. REAL PARTY IN INTEREST

The real party in interest is Honeywell International, Inc., which changed its corporate name from AlliedSignal, Inc, the assignee of record.

2. RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal, please note that there are no other related applications on appeal or subject to an interference known to Appellant, Appellant's legal representative or the assignee.

3. STATUS OF CLAIMS

The claims in the application are 29-48. Claims 29-48 are pending, stand rejected and are on appeal. Claims 1-28 have been canceled. No claims are allowed.

4. STATUS OF AMENDMENTS

No amendment was filed after final rejection. A response to the final rejection was filed on October 20, 2005, but the Examiner ruled that the response did not place the application in condition for allowance.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention claims a process method of making a Saxony carpet comprising the steps:

- a. forming an untwisted core strand comprising at least one member selected from the group consisting of a natural or synthetic fiber; (see page 6, lines 6-7 of the specification)
- b. forming a wrapper yarn comprising at least one base synthetic fiber material, and a heat activated binder fiber having a melting point at least 20°C lower than the base synthetic fiber; (see page 6, lines 7-9; page 8, lines 27-32)

- c. wrapping the wrapper yarn about the core strand, forming an untwisted wrapped singles yarn; (see page 11, lines 8-11)
- d. heat setting the untwisted wrapped singles yarn at a temperature sufficient to melt the heated activated binder material, then subsequently cooling and solidifying said melt, thereby constricting the base synthetic fiber component of the wrapper yarn about the core strand and securing it to the core strand; (see page 11, lines 17-21, page 6, line 31- page 7, line 11)
- e. incorporating the untwisted heat-treated yarn into a backing material as loops; (see page 5, lines 28-29, page 11, lines 21-22)
- f. cutting the loops to form vertical tufts; (page 5, line 29, page 11, lines 22-23) and
- g. dyeing and finishing (see page 5, line 29, page 11, lines 22-23).

The claimed method teaches the formation of Saxony carpet untwisted wrapped singles yarns having a core strand and a wrapper yarn (see page 1, lines 6-15, page 11, lines 12-23 of the specification). A Saxony carpet is a type of carpet in which the individual pile yarn tufts are well defined giving a pointilist effect (see page 1, lines 23-24). Saxony carpets are distinguished from plush carpets. In plush carpets, the fibers from one tuft are indistinguishable from the fibers from surrounding tufts, giving a velvet-like appearance (see page 1, lines 22-23). Saxony carpets formed from the method of the invention have a surface appearance, individual tip retention, pile density, resilient hand and wear resistance comparable or superior to conventional Saxony carpets made from multiple plied twist set yarns (see page 1, lines 11-15). The claimed method is intended specifically as an alternative to methods that require typical twisting procedures, avoiding the problems associated with typical twist set carpets, and thereby providing a solution to a need in the art (see page 3, lines 1-5, page 3 lines 13-21, page 5, lines 19-29).

6. GROUND'S OF REJECTION TO BE REVIEWED ON APPEAL

(a) Claim 29 stands rejected under 35 U.S.C. 102(b) as being anticipated by WO 99/14408.

(b) Claims 29-48 stand rejected under 35 U.S.C. 103(a) as obvious over WO 99/14408 in view of JP 2300340.

(c) Claims 29-36 and 43-48 stand rejected under 35 U.S.C. 103(a) as obvious over JP 2300340 in view of WO 99/14408.

7. ARGUMENT

(a) Claim 29 stands rejected under 35 U.S.C. 102(b) as being anticipated by WO 99/14408.

The Appellant respectfully submits that the Examiner is incorrect and should be overruled.

Reference WO 99/14408 is commonly owned and related to the present application. Each of WO 99/14408 and the present application share the same sole inventor, Charles Edward Bowers. The United States patent equivalent to WO 99/14408 is issued U.S. patent 6,682,618 to Bowers.

The presently claimed invention relates to the manufacture of Saxony carpet. More particularly, the invention relates to a method for making Saxony carpet using untwisted wrapped singles yarns. As discussed in the present application, on page 4, lines 1-3, the current invention is an improvement over the inventions disclosed in WO 99/14408 and patent application serial number 08/933,822, now U.S. patent 6,682,618. The Appellant respectfully urges that the present invention is patentably distinct from the inventions of these documents.

In order to support a 35 U.S.C. 102 rejection, the Examiner is obliged to show each and every element of the claimed invention in a single reference. It is submitted that the

Examiner has failed to satisfy this obligation in applying WO 99/14408. The cited reference fails to teach untwisted wrapped singles yarns comprising a base synthetic fiber wrapper yarn containing heat activated binder material. It should be noted that a key feature of the present invention is that such yarns are untwisted. In contrast, WO '408 relates to twist set yarns, and a process for forming such yarns with heat-activated binders which melt during twist setting process conditions. The Examiner asserts that while the WO '408 patent teaches the use of twisted heat-treated yarns, such twisting is not required, and therefore it can be implied that this reference teaches the untwisted yarns of the present invention. It is respectfully urged that the Examiner is impermissibly reconstructing the art in light of the Appellant's disclosure. The issue is not whether the invention of WO '408 *could* be processed into an untwisted yarn, but rather, whether WO '408 *actually teaches* such an untwisted yarn. The cited reference makes no such disclosure. WO 99/14408 teaches a generic wrapped yarn where a heat activated binder material is incorporated in a wrapper yarn. Their yarn is then twist set under high temperatures in standard twisting processes. The fibers of WO 99/14408 are taught to retain good properties after being subjected to common high temperature *twist setting procedures*. The Board is directed to page 4, lines 11-21 of WO 99/14408 which discusses the utility of the reference for such twist setting procedures, whereby the use of a heat-activated binder having a lower melting point compared to a base fiber offers an improved response to twist setting, resulting in improved properties. The Board is further directed to page 6, lines 1-20, which describes the twist setting conditions, e.g. the Suessen twist setting process, that WO 99/14408 employs. As discussed above, the claimed method is intended specifically as an alternative to methods that require typical twisting procedures, avoiding the problems associated with typical twist set carpets, and thereby providing a solution to a need in the art.

A careful reading of WO 99/14408, including a word search fails to even mention or imply untwisted yarns. WO 99/14408 is 180° contrary to the instant invention because WO 99/14408 requires twisted yarns and the instant invention requires untwisted yarns per claim element (c). Since the present invention relates to the formation of Saxony

carpet using untwisted wrapped singles yarns that are not twist set, it is urged that the carpet of the claimed invention and a carpet formed according to the WO 99/14408 reference have significant structural differences.

The Examiner points to page 3, lines 10-31 and claims 1, 14 and 15 for the proposition that WO 99/14408 may employ untwisted yarns because twist is not discussed at these portions of the patent. This is insufficient to form an anticipation rejection. In order to anticipate, the employed reference must affirmatively teach the point in question. The Examiner cannot merely look at a void in the reference and then attempt to fill that void with arguments that the invention could theoretically fit there. Upon Appellant's specific request for the Examiner to point to the specific line and page numbers of the reference where an untwisted yarn is specifically and affirmatively mentioned, the Examiner has failed to do so. Rather, the Examiner continues to point to claims 1, 14 and 15 of the applied reference which do not specifically describe the twisting of yarns, questioning how the yarns of the reference are twist set if it is not specifically described for each of these claims. It is submitted that the Examiner has applied a legally impermissible standard of patentability, failing to show where the reference affirmatively teaches untwisted yarns. For all of the above reasons, it is respectfully urged that the presently claimed invention is patentably distinct from WO 99/14408, and the 35 U.S.C. 102(b) rejection should be overruled.

(b) Claims 29-48 stand rejected under 35 U.S.C. 103(a) as obvious over WO 99/14408 in view of JP 2300340.

The Examiner asserts that WO '408 teaches each feature of the presently claimed invention except for the incorporation of a heat-treated yarn into the carpet primary backing as loops. The Examiner thus cites JP 2300340 to fill this void. It is respectfully submitted that this rejection is incorrect and should be overruled.

The arguments with regard to WO 99/14408 are repeated from above and apply equally herein. Applicants urge that WO '408 fails to teach several features of the present claims, and that even upon a combining with JP 2300340, the presently claimed invention would fail to be obviated. WO 99/14408 teaches a generic wrapped yarn where a heat activated binder material is incorporated in a wrapper yarn. Their yarn is then *twist set* under high temperatures in standard twisting processes. The fibers of WO 99/14408 are taught to retain good properties after being subjected to common high temperature *twist setting procedures*. The present invention teaches *untwisted* wrapped singles yarns which comprise a base synthetic fiber wrapper yarn containing heat activated binder material. A key feature of the present invention is that such yarns are *untwisted*. These yarns of the present invention exhibit greater texture retention, tip definition, bulk and wear resistance than those taught by WO 99/14408. Further, the present invention allows for the elimination of the slow and expensive steps of twisting, plying and re-twisting of a singles yarn previously necessary for the formation of Saxony carpets. Such is not taught by WO '408.

Regarding JP 2300340, this reference relates to a multi-ply yarn including a sliver 1 and a filament 2 that are aligned in parallel, without twisting, to form a conjugate yarn which is incorporated into a carpet backing in the form of loops. The Examiner asserts that it would have been obvious for one skilled in the art to combine the twist-free loops as taught by JP 2300340 with the heat-treated-yarn formation process of WO '408.

Applicants strongly disagree. However, there is *nothing* in either cited reference which shows that such a combination would or could be successful. JP 2300340 does not teach or suggest heat treating as taught by WO '408. Furthermore, WO '408 does not teach untwisted fibers. When selective combination of prior art references is needed to make an invention seem obvious, there must be something in the art to suggest that particular combination other than hindsight gleaned from the invention itself, something to suggest the desirability of the combination. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 5 U.S.P.Q.2d 1434, 1438 (CAFC 1988). This teaching or suggestion is absent in the selected combination of references. Thus, it is urged that one skilled in the art would not have

been inspired to combine the teachings of WO 99/14408 with those of JP2300340 to arrive at the present invention.

The Patent and Trademark Office Board of Appeals and Interferences stated the following in *Ex parte Clapp*, 227 USPQ 972 (1985), at page 973:

Presuming *arguendo* that the references show the elements or concepts urged by the Examiner, the Examiner has presented no line of reasoning, and we know of none, as to why the artist when viewing only the collective teachings of the references would have found it obvious to selectively pick and choose various elements and/or concepts from the several references relied on to arrive at the claimed invention. In the instant application, the Examiner has done little more than cite references to show that one or more elements or some combinations thereof, when each is viewed in a vacuum, is known. The claimed invention, however, is clearly directed to the combination of elements. That is to say, applicant does not claim that he has invented one or more new elements but has presented claims to a new combination of elements. To support the conclusion of the claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination where the Examiner must present a convincing line of reasoning as to why the artist would have found the claimed invention to have been obvious in light of the teaching of the references.

With the above directives, consideration must be given as to whether the combination of references in the manner set forth in the Office Action is proper to render the Appellant's invention obvious in view thereof. Moreover, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

As set forth hereinabove, Appellant respectfully asserts that the references do not teach or suggest the combination as set forth in the claims, as is evident from the plurality of differences between applicant's invention and the cited art. Again, the combination of references must teach the claimed combination to render applicant's claimed invention

obvious under 35 U.S.C. 103. As such, it is respectfully submitted that none of the applied references, either alone or in combination, teach or suggest the claimed invention.

It is submitted that the Examiner is looking beyond the teachings of the references. Furthermore, it is urged that even upon such a hypothetical combination, the present claims would fail to be obviated. It is again urged that these references do not teach or suggest the combination as set forth in the claims, as is evident from the differences between applicant's invention and the cited art. As such, it is respectfully submitted that neither of the cited references WO 99/14408 and JP2300340, either alone or in combination, teach or suggest the claimed invention. For these reasons, it is respectfully submitted that the 35 U.S.C. 103 rejection is incorrect and should be overruled.

(c) Claims 29-36 and 43-48 stand rejected are unpatentable under 35 U.S.C. 103(a) over JP 2300340 in view of WO 99/14408.

It is respectfully submitted that the rejection is incorrect and should be overruled.

The arguments regarding both WO 99/14408 and JP 2300340 are repeated from above herein. The Examiner agrees that JP 2300340 fails to teach several features of the present claims. However, the Examiner urges that it would have been obvious incorporate the use of a heat activated binder fiber into JP 2300340's structure since such is taught by WO '408. Applicants respectfully disagree, and urge that the Examiner is impermissibly reconstructing the art in light of Applicants' disclosure. The point in time that is critical for an obviousness determination is at the time the invention. "To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). An invention cannot be deemed unpatentable merely because, in a hindsight attempt to reconstruct the invention, one can find elements of it in the art; it must be shown that the invention as a whole was obvious at the time the

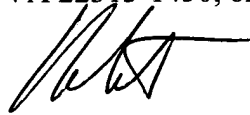
invention was made without knowledge of the claimed invention. No such showing has been made by the Examiner. As stated above, it is urged JP 2300340 does not teach or suggest heat treating as taught by WO '408. Furthermore, WO '408 does not teach untwisted fibers as required by JP2300340. Applicants submit that there is simply nothing in either of WO 99/14408 or JP 2300340 that would inspire one of ordinary skill in the art to combine these two references in an effort to formulate the present invention. Furthermore, there is *nothing* in either cited reference which shows that such a combination would or could be successful. For all of the above reasons, Appellant respectfully urges that the 35 U.S.C. 103 rejection is incorrect and should be overruled. None of the cited references, taken alone or in combination, teaches or suggests the invention claimed by Applicants. For all the above reasons, claims 29-48 are urged to be patentable over the cited references, and the rejections under 35 U.S.C.102(b) and 35 U.S.C.103(a) should be overruled.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage pre-paid in an envelope addressed to Commissioner for Patents and Trademarks, P.O. Box 1450, Alexandria, VA 22313-1450, on February 7, 2006.



Richard S. Roberts

8. CLAIMS APPENDIX

Claims 1-28 are canceled.

29. The method of making a Saxony carpet comprising the steps:

- a. forming an untwisted core strand comprising at least one member selected from the group consisting of a natural or synthetic fiber;
- b. forming a wrapper yarn comprising at least one base synthetic fiber material, and a heat activated binder fiber having a melting point at least 20°C lower than the base synthetic fiber;
- c. wrapping the wrapper yarn about the core strand, forming an untwisted wrapped singles yarn;
- d. heat setting the untwisted wrapped singles yarn at a temperature sufficient to melt the heated activated binder material, then subsequently cooling and solidifying said melt, thereby constricting the base synthetic fiber component of the wrapper yarn about the core strand and securing it to the core strand;
- e. incorporating the untwisted heat-treated yarn into a backing material as loops;
- f. cutting the loops to form vertical tufts; and
- g. dyeing and finishing.

30. The method of claim 29 wherein the wrapper yarn is a continuous filament yarn of about 20 to 200 denier.

31. The method of claim 29 wherein the wrapper yarn is a continuous filament yarn of about 40 to 80 denier.

32. The method of claim 29 wherein the wrapper yarn contains about 5 to 95 weight percent of the heat activated binder fiber.

33. The method of claim 29 wherein the wrapper yarn contains about 15 to 85 weight percent of the heat activated binder fiber.

34. The method of claim 29 wherein the wrapper yarn contains about 25 to 75 weight percent of the heat activated binder fiber.
35. The method of claim 29 wherein the wrapper yarn makes about 2 to 10 wraps per inch about the core strand.
36. The method of claim 29 wherein the wrapper yarn makes about 3 to 5 wraps per inch about the core strand.
37. The method of claim 29 wherein the core strand is a sliver of about 0.8 to 6 cotton count.
38. The method of claim 29 wherein the core strand is a sliver of about 1 to 5 cotton count.
39. The method of claim 29 wherein the core strand is a sliver of about 1 to 3 cotton count.
40. The method of claim 29 wherein the core strand is a bulked continuous filament yarn of about 900 to 6000 denier.
41. The method of claim 29 wherein the core strand is a bulked continuous filament yarn of about 1000 to 5300 denier.
42. The method of claim 29 wherein the core strand is a bulked continuous filament yarn of about 1000 to 3000 denier.
43. The method of claim 29 wherein the core strand is comprised of at least one member selected from the group consisting of textile fibers of cotton, wool, polyester, polyolefin,

and polyamide.

44. The method of claim 29 wherein the core strand contains about 0-12 weight percent of a heat activated binder fiber having a melting point at least about 20 degrees C. lower than the textile fiber constituents.

45. The method of claim 29 wherein the core strand contains about 0 to 6 weight percent of a heat activated binder fiber having a melting point at least about 20 degrees C. lower than the textile fiber constituents.

46. The method of claim 29 wherein the core strand contains about 0 to 3 weight percent of a heat activated binder fiber having a melting point at least about 20 degrees C. lower than the textile fiber constituents.

47. The method of claim 29 wherein the core strand contains about 0 to 1 weight percent of a heat activated binder fiber having a melting point at least about 20 degrees C. lower than the textile fiber constituents.

48. The method of claim 29 wherein the total content of heat activated binder fiber is 0.05-2.5 weight percent of the total yarn.

9. EVIDENCE APPENDIX

None

10. RELATED PROCEEDINGS APPENDIX

None